



P#10

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Nishino, N., et al.

Art Unit : 1646

Serial No. : 09/945,237

Examiner : Unknown

Filed : August 31, 2001

Title : NOVEL CYCLIC TETRAPEPTIDE DERIVATIVES AND PHARMACEUTICAL USES THEREOF

Commissioner for Patents

P.O. Box 2327

Arlington, VA 22202

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed for filing in the above-referenced patent application is a Form PTO-1449, being submitted prior to the first Office Action on the merits. Applicants respectfully request consideration of the remarks and references set forth herein.

The following documents are enclosed herewith:

- copy of Form PTO-1449
- Postcard
- copies of cited references

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I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202.

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Jeanne Amour Rice

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| Substitute Form PTO-1449 (Modified) | U.S. Department of Commerce Patent and Trademark Office | Attorney's Docket No. 13863-002001 | Application No. 09/945,237 |
| Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b)) | | Applicant Nishino, N., et al. | |
| | | Filing Date August 31, 2001 | Group Art Unit 1646 |

U.S. Patent Documents

| Examiner Initial | Desig. ID | Document Number | Publication Date | Patentee | Class | Subclass | Filing Date If Appropriate |
|------------------|-----------|-----------------|------------------|----------|-------|----------|----------------------------|
| | AA | | | | | | |
| | AB | | | | | | |
| | AC | | | | | | |

Foreign Patent Documents or Published Foreign Patent Applications

| Examiner Initial | Desig. ID | Document Number | Publication Date | Country or Patent Office | Class | Subclass | Translation | |
|------------------|-----------|-----------------|------------------|--------------------------|-------|----------|-----------------------|----|
| | | | | | | | Yes | No |
| | AD | | | | | | | |
| | AE | | | | | | | |
| | AF | | | | | | JAN 24 2003 | |
| | AG | | | | | | | |
| | AH | | | | | | TECH CENTER 1600/2900 | |

Other Documents (include Author, Title, Date, and Place of Publication)

| Examiner Initial | Desig. ID | Document |
|------------------|-----------|---|
| | AI | Nishino et al., "Cyclic Tetrapeptide Hydroxamic Acids Related to Trapoxin B Inhibit Histone Deacetylase", <u>Peptides</u> , pp. 832-833, 1998 |
| | AJ | Tomizaki, et al., "Histone Deacetylase Inhibitors Based on Trapoxin B", <u>Peptide Science</u> , Vol. 35, pp. 181-184, 1998 |
| | AK | Nishino, et al., "Synthesis of Cyclic Tetrapeptides Containing Non-natural Imino Acids", <u>Peptide Science</u> , Vol. 35, pp. 189-192, 1998 |
| | AL | Tsukamoto, et al., "Synthesis and Activity of Cyl-1 Analogs having Hydroxamic Acid at Side Chain", <u>Peptide Science</u> , pp. 185-188, 1998 |
| | AM | Komatsu, et al., "Histone Deacetylase Inhibitors Up-regulate the Expression of Cell Surface MHC Class-I Molecules in B16/BL6 Cells", <u>Journal of Antibiotics</u> , Vol. 51, No. 1, pp. 89-91, January, 1998 |
| | AN | Yoshida, et al., "Histone deacetylase as a new target for cancer chemotherapy", <u>Cancer Chemotherapy and Pharmacology</u> Vol. 48, No. Suppl. 1, pp. S20-S26, July 1, 2001 |
| | AO | Furuma, et al., "Potent histone deacetylase inhibitors built from trichostatin A and cyclic tetrapeptide antibiotics including trapoxin", <u>Proceedings of the National Academy of Sciences</u> , Vol. 98, No. 1, pp. 87-92, January 2, 2001 |

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| Examiner Signature | Date Considered |
| EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. | |



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| Eingangsstelle | |
| Gulde Hengelhaupt Ziebig & Schneider | |
| DE | 09.0EZ.2002 |
| WV | Datum/Date |
| FRIST | 09.12.02 |

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| Zeichen/Ref/Réf. P120501EP-Zie | Anmeldung Nr./Application No./Demande n°./Patent Nr./Patent No./Brevet n°. 00905381.0-2404-JP0001141 |
| Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire Japan Energy Corporation | |

COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





| DOCUMENTS CONSIDERED TO BE RELEVANT | | | CLASSIFICATION OF THE APPLICATION (Int.Cl.7) |
|--|---|----------------------------------|--|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | |
| X | NISHINO N ET AL: "CYCLIC TETRAPEPTIDE HYDROXAMIC ACIDS RELATED TO TRAPOXIN B INHIBIT HISTONE DEACETYLASE" PEPTIDES, ELMSFORD, US, 1998, pages 832-833, XP000985719 ISSN: 0196-9781 * the whole document * | 1-9 | C07K5/12 A61K38/12 |
| (1) | | | |
| X | KIN-YA TOMIZAKI ET AL: "HISTONE DEACETYLASE INHIBITORS BASED ON TRAPOXIN B" PEPTIDE SCIENCE, PROTEIN RESEARCH FOUNDATION, MINOO,, JP, vol. 35, 1998, pages 181-184, XP000985575 ISSN: 1344-7661 * the whole document * | 1-9 | |
| (2) | | | |
| X | HIDEKAZU NISHINO ET AL: "SYNTHESIS OF CYCLIC TETRAPEPTIDES CONTAINING NON-NATURAL IMINO ACIDS" PEPTIDE SCIENCE, PROTEIN RESEARCH FOUNDATION, MINOO,, JP, vol. 35, 1998, pages 189-192, XP000985577 ISSN: 1344-7661 * the whole document * | 1-9 | |
| (3) | | | |
| X | MAKIKO TSUKAMOTO ET AL: "SYNTHESIS AND ACTIVITY OF CYL-1 ANALOGS HAVING HYDROXAMIC ACID AT SIDE CHAIN" PEPTIDE SCIENCE, PROTEIN RESEARCH FOUNDATION, MINOO,, JP, 1998, pages 185-188, XP000985651 ISSN: 1344-7661 * the whole document * | 1-9 | |
| (4) | | | |
| | The supplementary search report has been based on the last set of claims valid and available at the start of the search. | -/- | |
| 7 | | | |
| Place of search | | Date of completion of the search | Examiner |
| MUNICH | | 20 November 2002 | López García, F |
| CATEGORY OF CITED DOCUMENTS | | | |
| X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | | |
| T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | | | |
| EPO FORM 1503.03/02 (P04C04) | | | |



| DOCUMENTS CONSIDERED TO BE RELEVANT | | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.7) |
|---|--|---|--|
| Category | Citation of document with indication, where appropriate, of relevant passages | | |
| A | KOMATSU Y ET AL: "HISTONE DEACETYLASE INHIBITORS UP-REGULATE THE EXPRESSION OF CELL SURFACE MHC CLASS-I MOLECULES IN B16/BL6 CELLS" ⑤ JOURNAL OF ANTIBIOTICS, JAPAN ANTIBIOTICS RESEARCH ASSOCIATION, TOKYO, JP, vol. 51, no. 1, January 1998 (1998-01), pages 89-91, XP001055762 ISSN: 0021-8820 * the whole document * ----- | 1-9 | |
| T | YOSHIDA M ET AL: "Histone deacetylase as a new target for cancer chemotherapy" CANCER CHEMOTHERAPY AND PHARMACOLOGY, SPRINGER VERLAG, BERLIN, DE, ⑥ vol. 48, no. Suppl 1, 1 July 2001 (2001-07-01), pages S20-S26, XP002188621 ISSN: 0344-5704 * the whole document * ----- | 1-9 | |
| T | FURUMAI RYOHEI ET AL: "Potent histone deacetylase inhibitors built from trichostatin A and cyclic tetrapeptide antibiotics including trapoxin." ⑦ PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 98, no. 1, 2 January 2001 (2001-01-02), pages 87-92, XP002221718 January 2, 2001 ISSN: 0027-8424 * the whole document * ----- | 1-9 | TECHNICAL FIELDS SEARCHED (Int.Cl.7) |
| The supplementary search report has been based on the last set of claims valid and available at the start of the search. | | | |
| 7 | Place of search MUNICH | Date of completion of the search 20 November 2002 | Examiner López García, F |
| CATEGORY OF CITED DOCUMENTS | | T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | |
| X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | | |



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims: